90 Years of Research USDA History at Mandan

The staff of the Northern Great Plains Research Laboratory would like to welcome their neighbors throughout the region to join them to celebrate their "Proud Past and Promising Future". Festivities commence at 2 PM on July 22nd at the campus on Highway 6, south of the Heart River in Mandan., Cropping systems tours, cattlemen's tours, and campus tours (with speakers on ornamental grasses, beginning birding, trees, native plants, and children's activities) will be ongoing throughout the day. A free evening barbecue and entertainment by Milo and Emma Hatzenbuhler will complete the celebration.

The Northern Great Plains Research Laboratory has a long and varied history. Over the decades, research programs, facilities, and staff have dramatically increased and declined with the needs of family farmers and ranchers, public involvement, and Congressional support.

The Mandan story begins in 1908, when the business community began intensely petitioning the U.S. Congress for a Federal agricultural research facility in their community. They were very persuasive. The U.S. Congress authorized funding for a 'dry land agricultural research station' to be established at or near Mandan on August 8, 1912, Mandan business leaders that petitioned for the laboratory even purchased 320 acres of the land, which they leased to the federal government through 2010 for one dollar. The North Dakota legislature, however, later reimbursed them and took over the lease.

USDA research scientists arrived in Mandan in 1913, found housing, hired staff, and the building of the research laboratory campus began. With the priority to help sustain family farmers and ranchers, research began in sustainable crop rotations, easy to establish, long-lived shelterbelt trees, developing hardy northern fruit trees, and improved range capacity in 1914. In 2004, the Northern Great Plains Research Laboratory celebrates 90 years of continuous agricultural and environmental research, and is still committed to sustaining the family farmers and ranchers of this region.

The 1920s saw a substantial expansion of federal appropriations and research activities south of the Heart River at Mandan. A wheat breeding program was established in 1925 to support the burgeoning spring wheat industry of the region.

The USDA established a dairy research unit at Mandan in 1928. Today, Morton and Emmons Counties are the most significant dairy producing counties in North Dakota because of the early research into the feeding of locally produced feedstuffs for maximum production and efficiencies. The lab also imported select dairy sires for use in the USDA herd and sold bull claves to local dairymen to improve their herd's bloodlines.

In 1933, the station continued its expansion with the establishment of a major tree and grass propagation nursery as a resource for erosion control and prevention.

In the 'dust bowl' and depression in the 1930s, the USDA eliminated all federal funding for agricultural research and the Mandan lab was to be abolished. A massive letter writing campaign spearheaded by Mandan business leaders caused Congress to reconsider and keep the Northern Great Plains Research Laboratory going when many other facilities were closed. A significant downsizing did occur at Mandan when the USDA abandoned the wheat breeding program in 1934. Management of the Soil Erosion Nursery was also transferred to Soil Conservation Service (SCS) in 1935.

Expansion commenced again in 1936 when an intensive forage breeding program was inaugurated.

Several research buildings were added as WPA projects. A new dry-land soils research laboratory was established. An irrigation sub-station was build at Oaks, North Dakota. This significantly increased the research focus on improving soil productivity and sustainability, and brought considerable increases in laboratory personnel and budgets.

Following the extensive increases in local employment and budgets in the 1930s and 1940s, reorganization began again began in the late 1940s. The Soil Conservation Service Soil Erosion Nursery was moved out of Mandan in 1948. In 1955, USDA dairy research at the Mandan campus ceased. The beef cattle rangeland research program did greatly increase its research capacity at that time and took over half the land previously used by the dairy unit. The rest of the land was released back to the state of North Dakota.

Research priorities at the laboratory changed and grew. In 1956, a substation of the Mandan lab was established to study saline soils in the Red River Valley. Nordan Crested Wheatgrass, a forage grass of continuing popularity, was released to the public from the Mandan grass breeding program in 1953. The 1960s brought many buildings and renovations to the station. The current main research and office building was completed in 1966.

Research priorities continued to change at Mandan. After the introduction of many popular and successful fruit tree varieties throughout the years, and an excellent collaborative relationship with the Oscar Will Seed Company in Bismarck for expanding the availability of locally developed varieties to consumers, the fruit tree program was terminated in 1965. The orchards with over 1000 trees were bull-dozed. The windbreak tree program that had helped sustain family farmers and ranchers throughout the region was eliminated in 1967, only to be reopened a year later due to public outcry and Congressional support.

Research programs at Mandan in dry land cropping systems, agricultural moisture utilization and conservation, crop nutrient cycling, irrigation and drainage, range utilization, and forage breeding were adding volumes to modern agricultural science during the 1960s. By 1969, there were 15 ARS scientists and over 30 local support staff at the Northern Great Plains Research Laboratory. The laboratory had 28 buildings, owned 1,120 acres and leased 1,064 acres.

The 1970s brought new research programs to the scientific campus in mine-land reclamation, forage and tree breeding, and conservation tillage. The forage and range research program was expanded in the 1970s by adding a forage breeder, an agronomist, and an animal scientist.

As Mandan's budgets declined in the late 1970s, the extent of research was reduced with the closure of the irrigation research field site at Oaks, ND (limited research was inaugurated near the lab) and the closing of the mine-reclamation program. The windbreak tree research program was closed by the agency again in 1975, but community pressure caused it to reopen again the very next year. A tree geneticist and a plant pathologist were employed to rebuild the research program.

The 1980s saw significant research advances at the Northern Great Plains Research Laboratory. Examples include the development and public release of Manska and Reliant intermediate wheatgrass varieties, Rodan western wheatgrass, and also Mankota Russian wildrye.

In 1984, the local Soil Conservation Districts, along with the USDA Agricultural Research Service, founded the Area IV SCD Cooperative Research Farm. This 400 acre research farm, located approximately 3 miles southwest of scientific campus, was created to allow the Mandan scientists to complete conservation tillage and cropping systems research utilizing modern-sized farming fields and equipment, which are greatly more credible with Ag producers.

The budget declines in the 1990s were a difficult experience for the staff of the Mandan laboratory. The irrigation research program was discontinued. The windbreak program was closed for the third and final time. Possibly sensing diminished support for the Mandan facility when no outcry over the tree program closing was heard, the USDA eliminated the laboratory in the federal budget in two successive years. But, due to strong support from the agricultural and environmental communities from throughout the region, and extensive communication from farmers and ranchers, of the significant need for the Ag and environmental research being accomplished at the Northern Great Plains Research Lab, Congress reappropriated funding to continue the Mandan research.

Since 1992, scientists at the Mandan lab have been supported by a Customer Focus Group of over 100 agricultural and environmental leaders from all over the region. Throughout the year, this group meets to review current research at the lab, discuss new research plans, and share the needs of family farmers and ranchers, and environmental concerns with the local scientists. This assistance and support assures the Mandan USDA scientists that their research focus continues to meet the needs of their customers.

Today, the program stability of the Northern Great Plains Research laboratory is stronger than ever. The lab has significant research programs in sustainable cropping systems, value-added livestock production, carbon sequestration, switchgrass biofuel production, crop moisture management, forage breeding, and integrated crop and livestock production systems.

The Mandan laboratory currently employs 13 scientists. Assisting the scientist are 25 year-round local support personnel and an additional 20 employees during the summer months. With over 2500 acres of land resources, a modern headquarters, laboratories, and greenhouses, the Mandan facility is poised to make significant contributions to agricultural and environmental research in the decades to come.